



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

MAY 16.

MR. MEEHAN, Vice-President, in the chair.

Twenty-eight persons present.

Influence of Heat on the separate Sexes of Flowers.—Referring to his former observations, in which it was noted that less heat was required to advance flowers than leaves, and still less for male than for female flowers, MR. MEEHAN called attention to a communication in an English scientific periodical, showing that the same facts may exist in the English climate as in our own. It appears that this season, according to the correspondent of *Hardwicke's Science Gossip*, the male flowers of the hazel-nut, *Corylus Avelana*, had been brought forward and perfected, before any signs of the female flowers appeared.

Liquid Exudations in Akebia and Mahonia.—MR. WM. M. CANBY called attention to the exudation of moisture from the tips of the leaflets in *Akebia quinata*, a plant twining over a trellis near his porch dripped moisture enough to make the floor look as if sprinkled. An examination of the leaflets by Prof. Rothrock disclosed an arrangement of the tissue at the apex of each leaflet, evidently adapted to such an exudation. MR. MEEHAN had been led by Mr. Canby's observations to watch closely a plant growing over a trellis on his house, confirming Mr. Canby's experience. The liquid globules on each leaflet were of the size of ordinary pin-heads. Their appearance was not constant, nor did there appear any regular period for the emission of the fluid. It was as likely to appear when the atmosphere was dry as when moist, or at midday as at evenings. The close relationship of *Lardizabalaceæ* to which *Akebia* belonged, to *Berberidaceæ*, led him to examine *Mahonia aquifolia*, flowering at the same time, and he found in many flowers just before expansion a small globule at the apex of the pistil, and in the same bud globules pressing through the divisions of the corolla. These would collect as they flowed out, and globules as large as peas, and of a quicksilver hue, were not unfrequently found among the mass of flowers forming the densely fasciculated head. The fluid was of a viscid character. Only a few flowers exhibited the exudation at each examination, and he was led to believe that the flow in each flower was soon over. In *Thuja* there was also this sudden appearance of a small globule at the open mouth of the naked ovule, and which seemed to disappear very soon after its formation. In a large number of flowers examined only a few with globules at the apex were found at each examination. The liquid in this case did not disappear by evaporation, but seemed to be absorbed by

the nucleus. Sachs suggests a use for the exudation in coniferæ. The pollen is brought to the globule by the winds, and, as the moisture sinks within the vesicle, the pollen grain is carried to the nucleus, and fertilization is effected by actual contact. It would be extremely difficult for the pollen to affect the nucleus in *Thuja*, and some other coniferæ, as in ordinary flowers, in the absence of this liquid exudation.

Individual Variation in Species.—MR. MEEHAN remarked on the prevailing tendency to look on striking variations in species as the result of hybridization. To his mind there were few species that did not exhibit a wide range of individual variation in some particulars, if we had good opportunities to look for them. He exhibited a series of cones taken from different trees of *Pinus rigida*, all gathered in Atlantic County, New Jersey, and pointed out how they each varied. Some double in length of their width, others conoid with a flattish base, others perfectly globular being rounded at both ends. Some had very narrow scales, and some half as broad as long, and again, some reflexed to a wonderful extent in drying, while some with the broad scales would only open to a very slight degree. Some trees would have cones several inches in length and width, while others had cones barely an inch long, and yet with perfect seeds. The cones were in a regularly graded order, the typical *P. rigida* at one end, at the other the cone would scarcely be distinguished from *P. serotina*. The intermediates then taken away from the central one left it to appear as a "hybrid" between the two.

Mr. Meehan said there was evidently a law of nature providing for individual variation. Whether this law of individual variation is distinct from that law of variation which resulted in the evolution of distinct species, might well be a question. It was at least well to recognize the two classes of variation for practical purposes.

Prof. Heilprin, Rev. Dr. McCook and Mr. Redfield discussed points suggested by Mr. Meehan's communication.

The following was ordered to be printed:—